

WHAT IS CLAIMED IS:

SYS A17

1. A method for mapping a descriptive language including a data description having a structure complexity into an object oriented data presentation, comprising the steps of:
 - 5 identifying the data description; and creating an object oriented class including an internal static class, wherein the internal static class corresponds to the structure complexity of the data description.
 - 10 2. The method as recited in claim 1, wherein said method further comprises receiving a Schema for an XML text.
 - 15 3. The method as recited in claim 1, wherein said identifying includes validating a Schema including a class description to provide the creation of an instance of a compiler class corresponding to the class description.
 4. The method as recited in claim 3, wherein said validating includes using a object finite state machine including a current state to verify a mutator method call against the current state of the object, wherein the Schema is invalid when the mutator method call is initiated before the current state is complete.
 - 20 5. The method as recited in claim 3, wherein said validating includes: sending a request including said Schema from a user to a remote server; and retrieving a validity determination as to said Schema.
 6. The method as recited in claim 3, wherein said validating includes: reading said Schema into a set of valid Schema descriptor classes; and

creating a set of objects out of the Schema wherein the occurrence of an object reflects validity.

7. The method as recited in claim 1, wherein said creating includes a set of object oriented classes selected from the group consisting of: Java, C++ and Smalltalk.
8. The method as recited in claim 1, wherein said creating includes representing a naming space with said internal static class to provide an implementation of said structure complexity.
9. A method for mapping a Schema including a structural complexity into an object oriented language including a functionality to provide a one to one correspondence between the structural complexity of the semantical language and the functionality of the object oriented language, comprising the steps of:
 - receiving said Schema;
 - validating said Schema;

15 creating a set of object oriented classes including a set of internal static classes to provide a mapping of the Schema into the object oriented language;

creating an instance corresponding to the object oriented classes;

compiling the instance to provide an object oriented code; and

transmitting the object oriented code.
10. The method as recited in claim 9, wherein said validating includes using a object finite state machine including a current state to verify a function call against the current state of the object, wherein the Schema is invalid when the function call is initiated before the current state is complete.
11. The method as recited in claim 9, wherein said validating includes:

sending a request including said Schema from a user to a remote server;
and
retrieving a validity determination as to said Schema.

12. The method as recited in claim 9, wherein said validating includes:
5 reading said Schema into a set of valid Schema descriptor classes; and
creating an instance of a compiler class wherein the compiler class is
described in the Schema.

13. The method as recited in claim 9, wherein said creating a set of object
oriented classes includes selected from the group consisting of: Java, C++ and
10 Smalltalk.

14. The method as recited in claim 9, wherein said creating an instance
includes representing a naming space with the internal static class to provide an
implementation of said structural complexity.

15. A computer readable medium containing programming which when
executed performs the following procedures comprising:
identifying a data description; and
creating an object oriented class including an internal static class, wherein
the internal static class corresponds to a structure complexity of the data
description.

20 16. The medium as recited in claim 15, wherein said medium further performs
the procedure receiving a Schema for an XML text.

17. The medium as recited in claim 15, wherein said identifying procedure includes validating a Schema including a class description to provide the creation of an instance of a compiler class corresponding to the class description.

18. The medium as recited in claim 17, wherein said validating procedure 5 includes using a object finite state machine including a current state to verify a mutator method call against the current state of the object, wherein the Schema is invalid when the mutator method call is initiated before the current state is complete.

19. The medium as recited in claim 17, wherein said validating procedure 10 includes:
sending a request including said Schema from a user to a remote server;
and
retrieving a validity determination as to said Schema.

20. The medium as recited in claim 17, wherein said validating procedure 15 includes:
reading said Schema into a set of valid Schema descriptor classes; and
creating a set of objects out of the Schema wherein the occurrence of an object reflects validity.

21. The medium as recited in claim 15, wherein said creating procedure 20 includes a set of object oriented classes selected from the group consisting of:
Java, C++ and Smalltalk.

22. The medium as recited in claim 15, wherein said creating procedure includes representing a naming space with said internal static class to provide an implementation of said structure complexity.

23. A computer readable medium containing programming for mapping a Schema including a structural complexity into an object oriented language including a functionality to provide a one to one correspondence between the structural complexity of the semantical language and the functionality of the object oriented language which when executed performs the following procedures comprising:

5 receiving said Schema;
validating said Schema;
creating a set of object oriented classes including a set of internal static

10 classes to provide a mapping of the Schema into the object oriented language;
creating an instance corresponding to the object oriented classes;
compiling the instance to provide an object oriented code; and
transmitting the object oriented code.

24. The medium as recited in claim 23, wherein said validating procedure includes using a object finite state machine including a current state to verify a function call against the current state of the object, wherein the Schema is invalid when the function call is initiated before the current state is complete.

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25. The medium as recited in claim 23, wherein said validating procedure includes:

20 sending a request including said Schema from a user to a remote server;
and
retrieving a validity determination as to said Schema.

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26. The medium as recited in claim 23, wherein said validating procedure includes:

reading said Schema into a set of valid Schema descriptor classes; and

creating an instance of a compiler class wherein the compiler class is described in the Schema.

27. The medium as recited in claim 23, wherein said creating a set of object oriented classes procedure includes an object oriented language selected from the group consisting of: Java, C++ and Smalltalk.

28. The medium as recited in claim 23, wherein said creating an instance procedure includes representing a naming space with the internal static class to provide an implementation of said structural complexity.

29. An apparatus for mapping a descriptive language including a data description having a structure complexity into an object oriented data presentation comprising:

means for identifying the data description; and
means for creating an object oriented class including an internal static class, wherein the internal static class corresponds to the structure complexity of the data description.

30. The apparatus as recited in claim 29, wherein said apparatus further comprises means for receiving a Schema for an XML text.

31. The apparatus as recited in claim 29, wherein said identifying means includes means for validating a Schema including a class description to provide the creation of an instance of a compiler class corresponding to the class description.

32. The apparatus as recited in claim 29, wherein said validating means includes a object finite state machine including a current state to verify a mutator

method call against the current state of the object, wherein the Schema is invalid when the mutator method call is initiated before the current state is complete.

33. The apparatus as recited in claim 29, wherein said validating means includes a web browser to send a request including said Schema from a user computer to a remote server, in response to said request, said Schema being validated.

34. The apparatus as recited in claim 29, wherein said validating means includes:

means for reading said Schema into a set of valid Schema descriptor classes; and

means for creating a set of objects out of the Schema wherein the occurrence of an object reflects validity.

35. The apparatus as recited in claim 29, wherein said creating means includes a set of object oriented classes selected from the group consisting of: Java, C++ and Smalltalk.

36. The apparatus as recited in claim 29, wherein said creating means includes means for representing a naming space with said internal static class to provide an implementation of said structure complexity.